Explanation of Significant Differences
Universal Oil Products Superfund Site
East Rutherford, Bergen County, New Jersey

I. Introduction

The New Jersey Department of Environmental Protection (NJDEP) prepared this Explanation of Significant Differences (ESD) to explain modifications to the remedy selected in the September 30, 1993, Record of Decision (ROD) for the Universal Oil Products Superfund Site (the "Site"). This ESD explains changes to the remedy relating to the treatment of the volatile organic compounds (VOC)-contaminated soils.

The remedy selected in the ROD called for a thermal desorption unit to treat VOCs and polychlorinated biphenyls/carcinogenic polycyclic aromatic hydrocarbons (PCBs/cPAHs) contaminated soils. However, when the thermal desorption unit was used to treat the PCB/cPAH-contaminated soil at the Site, operational problems occurred in the unit, and workers from an adjacent facility made complaints regarding the odors from the treatment system. Consequently, a Potentially Responsible Party (PRP) performing the remedy chose to investigate other treatment options. In December 1998, NJDEP and the United States Environmental Protection Agency (EPA) amended the remedy for the PCB/cPAH-contaminated soils. The amended remedy for the PCB/cPAH-contaminated soils was off-site disposal in a permitted landfill.

In June 1998, the remaining 2,000 cubic yards of VOC-contaminated soil were treated via a pilot test using a Thermally Enhanced Soil Vapor Extraction (TEVE) system. Pilot test results indicated that the VOC-contaminated soil was successfully treated to below remediation goals.

The remedy was implemented by a PRP. Under the Superfund Law (the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)), owners and operators of facilities and transporters and generators of hazardous chemicals can be held responsible for cleanup activities.

NJDEP is issuing this ESD in accordance with Section 117(c) of CERCLA, as amended, 42 U.S.C. § 9671(c), and Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. §300.435(c)(2)(i) (the NCP contains the EPA Regulations for implementing the Superfund program).

This ESD and those documents that form the basis for the decision to modify the remedy will be incorporated into the Administrative Record maintained for the Site in accordance with Section 300.825(a)(2) of the NCP. The Administrative Record is available for review during business hours at NJDEP, 401 East State Street, Trenton, NJ 08625, (609) 984-3081 and at the following information repositories: East Rutherford Municipal Building, 1 Everett Place, East Rutherford, NJ 07073, (201) 933-3444 and the East

Rutherford Memorial Library, 143 Boiling Springs Avenue, East Rutherford, NJ 07073, (201) 939-3930.

II. Site Location, History, and Contamination Problems

The Site, located in the Borough of East Rutherford, Bergen County, New Jersey, occupies approximately 75 acres in the Hackensack Meadowlands District. It is bounded to the north by Matheson Gas Products facility, a metal finishing facility, a truck and car repair shop, and a hotel. To the east are Berry's Creek and tidal marshes. To the south are commercial properties. To the west is New Jersey Route 17. The Site was developed in 1932 by Trubeck Laboratories, which built an aroma chemical laboratory. Trubeck began operating a solvent recovery facility and handling waste chemicals in 1955. In 1956, Trubeck constructed a wastewater treatment plant and in 1959, began utilizing two wastewater holding lagoons. UOP, Inc. acquired the property and facilities in 1960. Use of the waste treatment plant and wastewater lagoons ceased in 1971. All operations at the facility were terminated in 1979, and in 1980, all structures were demolished.

The Site has been divided into six areas: Areas 1, 1A, 2 and 5 are the uplands area of the Site; Area 3 is the former waste lagoons associated with the waste water treatment plant; and Area 4 is the on-site stream channels. Areas 1, 1A and 2 had VOC-contaminated soils and Area 5 had PAH-, PCB- and lead-contaminated soils. Area 2 also had PCB-contaminated soils.

The NJDEP has overseen activities at the Site since 1982 under various Administrative Consent Orders (ACOs). The Site was listed on the National Priorities List (NPL) on September 8, 1983. Activities performed under the most recent ACO have included investigations of the upland soils and leachate, the investigation of site stream channels, and the removal of the two wastewater lagoons in 1990. A Record of Decision (ROD) signed September 30, 1993, selected the remedial action for the uplands soils and leachate.

III. Selected Remedies in the ROD

The selected remedy specified the use of a thermal desorption system for the remediation of PCB/cPAH-contaminated soils and VOC-contaminated soils. In 1996, the remediation of the PCB/cPAH-contaminated soils began and a thermal desorption unit treated 8,200 tons of PCB/cPAH. However, there were many operational problems with the unit, and workers from an adjacent facility made complaints regarding the odors from the treatment plant. In 1997, the treatment system was removed from the Site because of these problems.

IV. Description of the Significant Differences and the Basis for those Differences

Because of the problems associated with the thermal desorption system, the PRP chose to investigate other treatment options for the VOC-contaminated soils. In June 1998, a pilot test was conducted on the remaining 2,000 cubic yards of VOC-contaminated soil using a

Thermally Enhanced Soil Vapor Extraction (TEVE) system. The TEVE system is an ex-situ technique for the removal and destruction of VOC. The TEVE system consists of a series of soil lifts placed over a heated air distribution piping system. Heated air is blown into the soil pile and passes through the soils to volatilize select organic contaminants. The vapors are then extracted from the pile and passed through a thermal oxidizer and a catalytic reactor to destroy the organic contaminants prior to atmospheric venting.

Based on the final soil sample results from the two piles, the TEVE successfully treated the VOC-contaminated soils below the remediation goals.

V. Modified Remedy

The modified remedy for the VOC-contaminated soils is the Thermally Enhanced Soil Vapor Extraction system that was used in the pilot study. The TEVE system is described in Section IV above. The modified remedy, TEVE system, expedited the remediation process, lowered operating costs, and eliminated odor complaints.

VI. Analysis of the Modified Remedy

In the ROD, the NJDEP and EPA stated that the remedy would comply with the requirements of Section 121 of CERCLA, 42 U.S.C. § 9621. Section 121 requires that the remedy must at least satisfy the following two threshold criteria:

Overall Protection of Human Health and the Environment

Addresses whether a remedy provides adequate protection of human health and the environment from unacceptable risks posed by hazardous substances, pollutants, or contaminants present at the Site by eliminating, reducing, or controlling exposures through treatment, engineering, or institutional controls.

Compliance with ARARs

Addresses whether the remedy meets all the applicable or relevant and appropriate of other Federal and state environmental statutes or provides a basis for invoking one of the six ARAR waivers stated in the NCP.

As described below, these criteria are met for VOC-contaminated soils.

1. Overall Protection of Human Health and the Environment:

The modified remedy is protective of human health and the environment. The TEVE system removed the volatile organic contamination from the soils. The modified remedy, TEVE system, expedited the remediation process, lowered operating costs, and eliminated odor complaints.

2. Compliance with ARARs:

The modified remedy complies with all ARARs identified in the ROD.

VII. Support Agency Comments

EPA concurs with the modified remedy as described in this ESD.

VIII. Affirmation of Statutory Determinations

Considering the new information that has been developed and the changes that have been made to the selected remedy, EPA and NJDEP believe that the remedy remains protective of human health and the environment, complies with federal and state requirements that were identified in the ROD and this ESD as applicable or relevant and appropriate to this remedial action, and is cost effective. In addition, the revised remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable for this Site.

IX. Public Participation Activities

In accordance with the NCP, a formal public comment period is not required when issuing an ESD. However, as required by CERCLA, NJDEP will announce the availability of the ESD in the local newspaper, the South Bergenite. The ESD will be placed in the Administrative Record for the Site, which is available for public review during business hours at NJDEP, 401 East State Street, Trenton, NJ 08625, (609) 984-3081 and at the following information repositories: East Rutherford Municipal Building, 1 Everett Place, East Rutherford, NJ 07073, (201) 933-3444 and the East Rutherford Memorial Library, 143 Boiling Springs Avenue, East Rutherford, NJ 07073, (201) 939-3930.

Richard J. Gimello, Assistant Commissioner
New Jersey Department of Environmental Protection

4/29/99
Date

Jeanne M. Fox, Regional Administrator
U.S. Environmental Protection Agency
Region II

4/12/99
Date